3D-DIGITAL DOCUMENTATION SUMMIT
POSTER ABSTRACT

COOPERATION CREATES A CUSTOM CRATE: Conservation, Laser Scanning, 3D Milling and Crate Building Work Together

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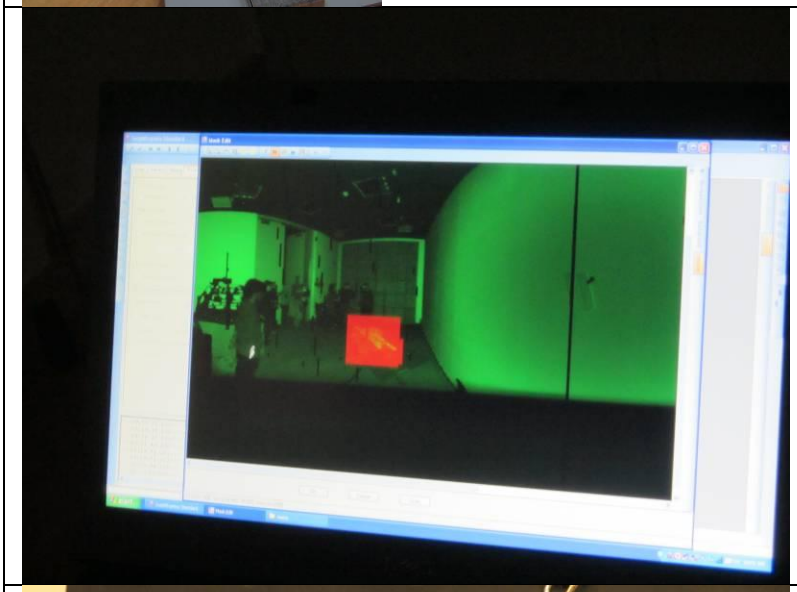
Claes Oldenburg's *Red Tights with Fragment 9* (1961) is created from single piece of contoured chicken wire, over which pieces of plaster-coated textile were draped and then painted. The sculpture hangs on the wall from a coat hanger embedded in the plaster. The fragility of the sculpture has been documented over the 50 years it has been in MoMA's collection. The edges in particular have been consolidated, filled and inpainted in several campaigns.

For a major Oldenburg retrospective the sculpture was requested for a five-venue international exhibition lasting two years. We judged this sculpture unsafe for travel in the hanging orientation. Laying the work flat for travel seemed safer provided we could develop a packing system that would adequately support the sculpture without touching the edges.

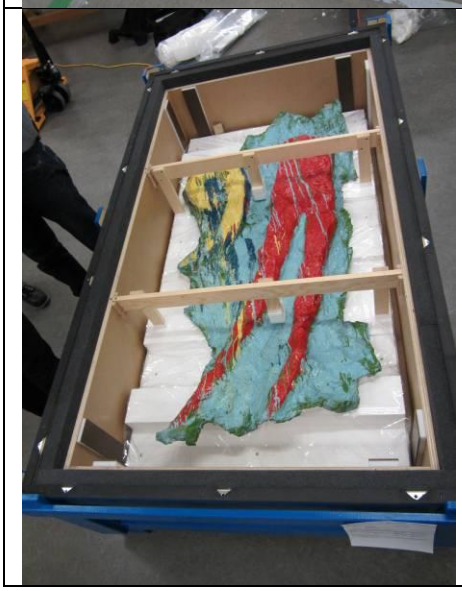
To design a custom contoured bed that would prevent horizontal movement in two directions we commissioned a laser scan of the reverse. An imaging company transformed the scan into a milled polystyrene support whose contour closely matched the underside of the sculpture. The crate builder recommended that the scan be cut into five sections for ease of fitting and handling of the sculpture. The milled support bars were made narrower than the sculpture so that the edges were free. The custom bed held the sculpture in place inside the crate so that it did not shift front-to-back or side-to-side. In a few locations positive pressure was applied from horizontal bars with pendant blocks, to prevent up and down motion of the sculpture during transit.

The design was successful and the sculpture arrived at the first venue with no travel damage.

Example Images:

	Scanning set-up.
	Selection of scanning area.
	Screen shot of raw scan.

		Detail from first test fitting, when support did not have an offset.
		Fit of final support.
		Channel left for hanging wire.

	Dartek reversibly attached with Tyvek tape (so it can be changed if it tears). Additional Dartek was placed in the crate.
	*Red Tights* on removable support (designed to reduce handling).
	*Red Tights* in crate with top fittings.

BIOGRAPHIES: Zycherman, O'Banion

Lynda Zycherman studied at the Conservation Center, and at the Metropolitan Museum with Pieter Meyers. In 1975 she became Conservator at the Freer Gallery of Art, working with Tom Chase. Her specialty was the technical examination of ancient Chinese material, especially the techniques of ceremonial bronze manufacture. With Elisabeth West FitzHugh, she discovered, identified, and characterized two, hitherto unknown, artificially produced Chinese pigments, Han blue and Han purple.

Lynda joined the Sculpture Conservation Laboratory at the Museum of Modern Art in 1984. She has researched a wide variety of topics including Minimalist sculpture, sculpture utilizing electric lights, Fluxus, and Brancusi's bronze sculptures.

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Steven O'Banion graduated from Middlebury College with a major in Biochemistry and a minor in the History of Art and Architecture. After completing pre-program internships at the Museum of Modern Art, the New York City Department of Parks & Recreation Citywide Monuments Conservation Program, and Wilson Conservation, Steven joined the Winterthur/University of Delaware Program in Art Conservation. Currently, Steven is a third-year student, specializing in objects with particular interests in modern/contemporary art, outdoor sculpture, public outreach, and preventive conservation. Steven has completed graduate-level internships with the Smithsonian American Art Museum and the Tate. At present, Steven is interning at the Museum of Modern Art.

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